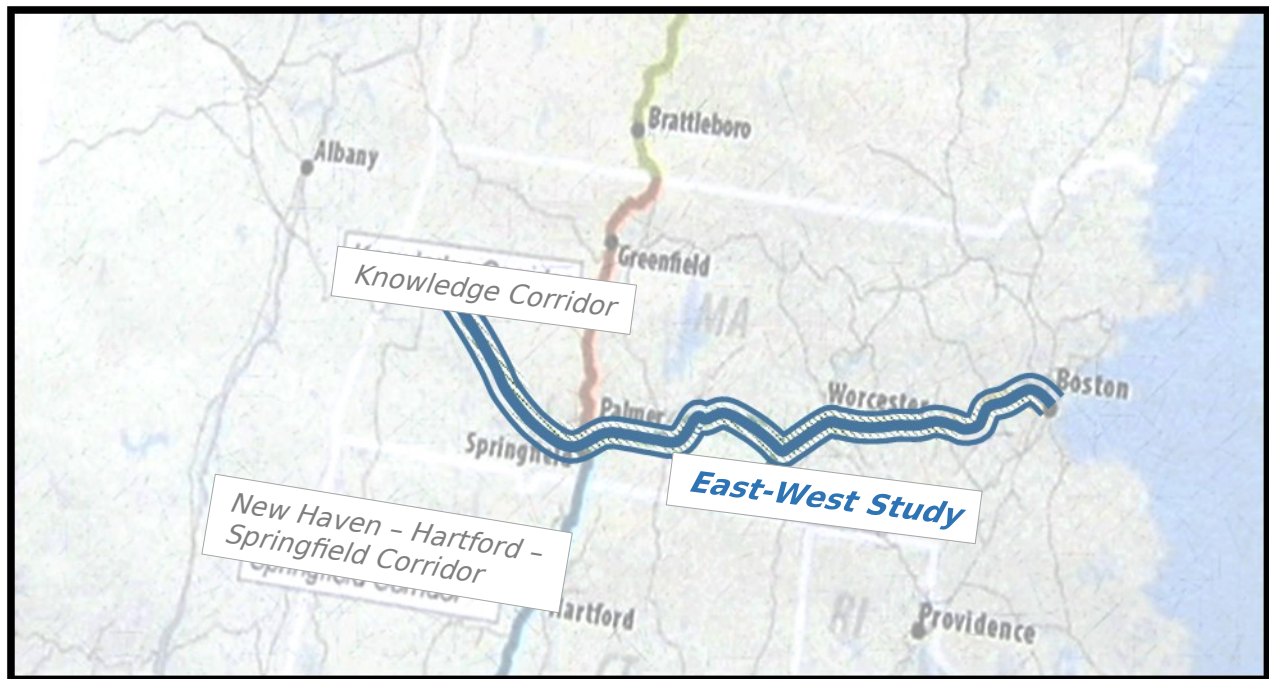


EAST-WEST RAIL STUDY SCOPE

PURPOSE OF STUDY

The Massachusetts Department of Transportation (MassDOT) seeks to examine the feasibility of passenger rail service – up to and including high speed rail – from Boston to Springfield and Pittsfield, with the speed, frequency, and reliability necessary to be a competitive option for travel along this corridor. This study will closely examine any associated implementation challenges, in particular those related to the movement of freight along the corridor, and identify all necessary improvements to support more frequent and higher speed intercity passenger rail service between Boston and Western Massachusetts. Given the recent or ongoing studies of portions of this corridor, this study should minimize the duplication of analysis.



Geographical and Physical Boundaries

The project limits for potential infrastructure improvements sit between Boston, Springfield and Pittsfield, as well as any additional right of way that may be necessary to accommodate maintenance,

adjust alignments, or otherwise support the examined future passenger service.

Other alternatives beyond those presented as rail options may consider a larger physical boundary to encompass other modal options.

STUDY TEAM ORGANIZATION

MassDOT's Office of Transportation Planning will lead the project including procurement, consultant oversight, and general coordination.

The study is to be completed by no later than **18 months from the Notice to Proceed**. This work plan summarizes the tasks associated with this study.

SCOPE OF WORK TASKS/DELIVERABLES

Task 1: Documenting Past Efforts

MassDOT is looking to build off of previous analysis, and take a thorough look at impediments to and market for significant improvements to make service that is frequent enough to be a viable option for travel along the corridor and for some commuting trips; and fast enough to be competitive with other modes of travel between Boston and Western Massachusetts. Therefore the Consultant must ensure that all past studies are examined, to avoid the duplication of past efforts. To achieve this, the Consultant will examine the:

- 2016 NNEIRI study
- 2010 State Rail Plan
- 2018 State Rail Plan
- New Haven-Hartford-Springfield High Speed Intercity Passenger Rail Corridor Program (NHHS HSIPR)
- Other studies/projects of relevance (including documents from Amtrak and FRA relating to the Inland route, and any recent planning efforts to increase terminal capacity at South Station)

Deliverables: A memorandum that summarizes the findings of prior studies and identifies major gaps in past analysis, as they relate to the

concept of providing more frequent and/or high speed east-west passenger rail service.

Task 2: Current Conditions: Market Analysis

The consultant will provide current conditions, by giving an overview of the travel market. This will include an examination of demographics, land use, and current and projected future travel patterns by rail and other modes between Boston and Western Massachusetts communities along the Inland Route. The Consultant will provide an overview of the rail service as it operates today, reflecting existing Amtrak, MBTA, and intercity bus service patterns during peak and non-peak travel times, in addition to traffic counts and congestion on parallel roadways.

Deliverables: A memorandum that explains the travel market, including current travel options, and incorporates a demographic and land use analysis. It should be accompanied by existing and future projections of travel patterns along the study area of the Inland Route using the current network build.

Task 3: Current Conditions: Physical, Regulatory, and ROW Ownership

The consultant will provide an assessment of physical, regulatory, and ownership opportunities and constraints based on current conditions.

Modifications to the East-West Route's track, right-of-way, or condition since the completion of prior studies or plans should be documented in this task. The consultant shall identify the freight usage of the East-West route, and report on future capacity of the line under a status quo scenario, identifying where track capacity is most limited based on corridor-level analysis. Potential service options envisioned in the study must consider track, signaling, and platform specifications that CSX, Amtrak or potentially other rail system owners/operators would require as owner, need in order to operate, or would be required to comply with.

To prepare for analysis of the physical opportunities and constraints, the consultant shall document: (1) corridor capacity levels, both current and future; (2) grade crossings by their condition and

protections, identifying any signalization needs; (3) the extent and physical characteristics of Positive Train Control (PTC) in use along the corridor or committed as funding; (3) current speed restrictions along the entirety of the corridor from Boston South Station to Pittsfield Amtrak Station, including those associated with track curvature or grade; (4) station platform conditions, including those platforms that do not meet ADA requirements for their full length; and (5) contractual, regulatory, and other restrictions on use of the corridor.

Deliverables: A technical memorandum identifying all major physical, regulatory, and ownership opportunities and constraints of the rail corridors between Boston and the studied end point(s) as outlined above.

Task 4: Potential Service Plan and Alternatives

MassDOT is looking to evaluate specific service models for direct point-to-point service between Boston, Springfield, and Pittsfield. Potential alternatives should support the long-term role of the rail corridor between Selkirk and Worcester as part of the nation's Class I freight network. The Consultant will help determine through the use of operations simulation tools if new passenger alternatives can be operated given the existing track capacity, with and without investments like the South Station Expansion (SSX) project, Tower I upgrades, and any right of way.

The Consultant will consider any viable service models identified in the NNEIRI study, any outputs from the MBTA Rail Vision, or new developments as part of the New Haven-Hartford-Springfield (NHHS) High-Speed Intercity Passenger Rail (HSIPR) Project, as part of its development of alternatives. The consultant may identify potential alternatives that require additional track or other infrastructure, or that meet the needs of an east-west rail connection in a way that may not necessarily include a one-seat rail connection. The consultant will also consider any additional infill stops between Worcester and Springfield, including Palmer. At least one of the alternatives explored should meet the definition of high speed rail and support trip times between Springfield and Boston of 90 minutes or less.

Deliverables: A draft version and final version of a technical memorandum identifying up to six service alternatives, at least one of which would be high speed rail, and the process used to select those alternatives. As part of this deliverable, detailed maps and high quality graphics of each of the alternatives will be developed.

Task 5: Alternatives Evaluation

The Consultant will work with MassDOT to evaluate the alternatives identified in Task 4. In order to project ridership, the Consultant will work with MassDOT and other associated operators to ensure that the alternatives developed meet and address the below baseline factors, including but not limited to:

- Projected Ridership – The Consultant should propose ridership projection methods including travel demand models
- Compliance with all Federal and other requirements around shared freight and passenger service
- Ability to deliver higher speed passenger rail service
- Impacts on freight capacity, including those related to increased need for maintenance windows
- Impacts on the scheduling and performance of existing MBTA Commuter Rail service
- Additional permitting requirements
- Additional right-of-way necessary
- Environmental and community impacts, including those related to any shift in freight movement from rail to trucking
- New/expanded rail storage facilities needed
- Community impacts (grade crossings, etc.)

In addition to the ridership analysis, alternatives will be evaluated using MassDOT investment criteria (system preservation, mobility, cost effectiveness, economic impact, safety, social equity and fairness, environment and health impacts, and policy support).

Deliverables: A draft version and final version of a technical memorandum summarizing the evaluation of each of the Task 4 alternatives. This will include a detailed report on ridership projections, with a transparent overview of ridership methodology.

Task 6: Cost Estimate

Develop order of magnitude cost estimates for each of the alternatives evaluated, based on Task 5. This cost estimate will consider both Amtrak and other potential operator cost structures, and include or be based on:

- Construction costs based on other projects of comparable scope, with a focus on any new stations, applicable track and signal expansion or upgrades, PTC investments
- Rolling stock/vehicle costs for each service plan
- Property takings, if necessary
- Operations and maintenance costs for each service plan
- Revenue implications including projected fare box revenues and fare recovery ratios based on ridership projections for each service plan, as well as potential joint development revenue opportunities

The cost estimate is to be based on comparable projects, adjusted appropriately to reflect scope and context.

Task 7: Development of Recommended Next Steps

The Consultant will assist MassDOT in developing a framework around the results of Tasks 5 and 6 to recommend next steps. The Consultant will support MassDOT with the following subtasks:

- Summarize all available public and private sector funding opportunities, and assess the likelihood of value capture as a funding mechanism.
- Conduct a full cost benefits analysis to quantify the economic, social and cultural benefits to both the Springfield and Pittsfield regions, and any others directly served by the recommended alternative.
- Develop a projected timeline for design, permitting and construction

Deliverables: The consultant shall work closely with MassDOT to provide:

- a final report to MassDOT that assesses the options considered, and presents MassDOT recommendations for both near-term and long-term actions, funding opportunities.
- Cost Benefit Analysis
- Project implementation timeline

Task 8: Public Involvement Plan

An Agency and Stakeholder Involvement Plan that recognizes the extended geography of the study and thinks creatively about how to respond to it will be prepared in coordination with MassDOT as follows:

1. Identify Stakeholders: The plan will outline the public and agency involvement program and will identify:
 - a. key contacts within agencies, public officials;
 - b. civic, transit, rail, and environmental advocacy groups;
 - c. business groups such as regional Chambers of Commerce and economic development agencies;
 - d. community outreach around where stations are located;
 - e. present and potential riders/users;
 - f. environmental justice populations; and
 - g. private service providers/shippers
2. Integration with study tasks: The plan will identify how involvement activities will be linked to key milestones regarding planning/engineering analysis.
3. Engagement of special populations: Specific communication strategies will be developed to ensure continuous and meaningful involvement by the public throughout the study. These strategies will ensure the full and fair participation by all potentially affected communities, including minority and low-income populations, in compliance with Title VI of the 1964 Civil Rights Act and Environmental Justice Executive Order 12898.

4. Consideration of public input: The plan will specify how public comment will be documented and reviewed to enable consideration in the planning process.
5. The draft Agency and Stakeholder Involvement Plan will be submitted to MassDOT for review. The final plan will be revised, based on received comments and resubmitted to MassDOT for approval.

Key features of the involvement plan include:

Public Meetings

A minimum of three public meetings are anticipated as part of the study. To conduct the public meetings the following activities will be required for each meeting:

- identify meeting locations, visit sites and confirm all site logistical elements and requirements;
- publicize meeting, targeting population and stakeholders in close proximity;
- prepare exhibits and hand out materials in accessible formats;
- prepare and manage all collateral materials – sign-in sheets, agendas, directional signs, and comment forms; and
- prepare meeting summary
- provide all materials in an accessible format after the meeting

Website

A website will be utilized for dissemination of information about the study, including all elements of the report as they are approved. MassDOT will host a webpage on the project on its own server. Materials will be provided to MassDOT in accessible format, in accordance with MassDOT standards.

Local Media Coordination

Press Releases announcing the upcoming public meetings and seeking comments will be drafted for review and release by MassDOT.

Compilation of Public Input

Public comments will be documented as follows:

- establish a web-based database system to organize all comments, with the ability to access customized reports;
- create a protocol to organize and summarize comments in the database and distribute among study team; and
- provide a protocol to respond to comments